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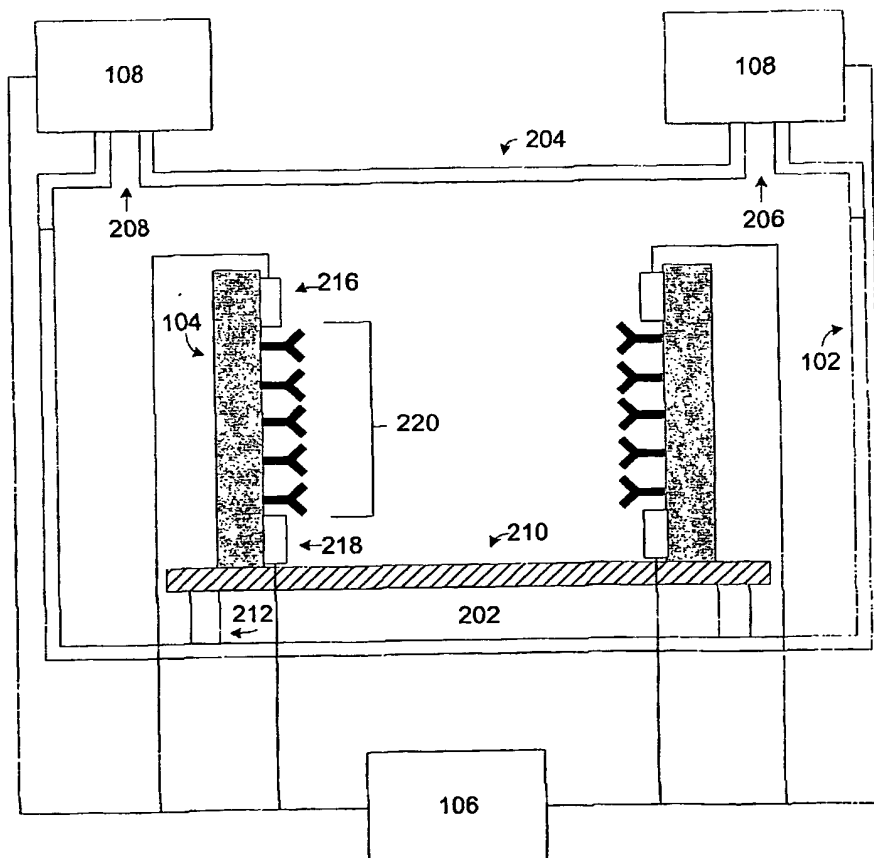
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(54) Title: DETECTION SYSTEMS AND METHODS



(57) Abstract: Detection systems and methods of their use are provided. An exemplary system comprises a chamber (102) for holding culture media, the chamber (102) having a cellular attachment surface (210), and a detector (104) disposed in the chamber (102) comprising a surface (214) modified with a binding agent (220) for binding a target substance wherein the detection system (104) is configured to detect interaction of the target substance with the binding substance (220). The detection can occur in either liquid or vapor phase and the subsequent action of the system is to respond in a programmed and appropriate manner to the binding event by activation of a chemical or physical responder. The system may also respond by communicating information to a control system via an alarm.



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